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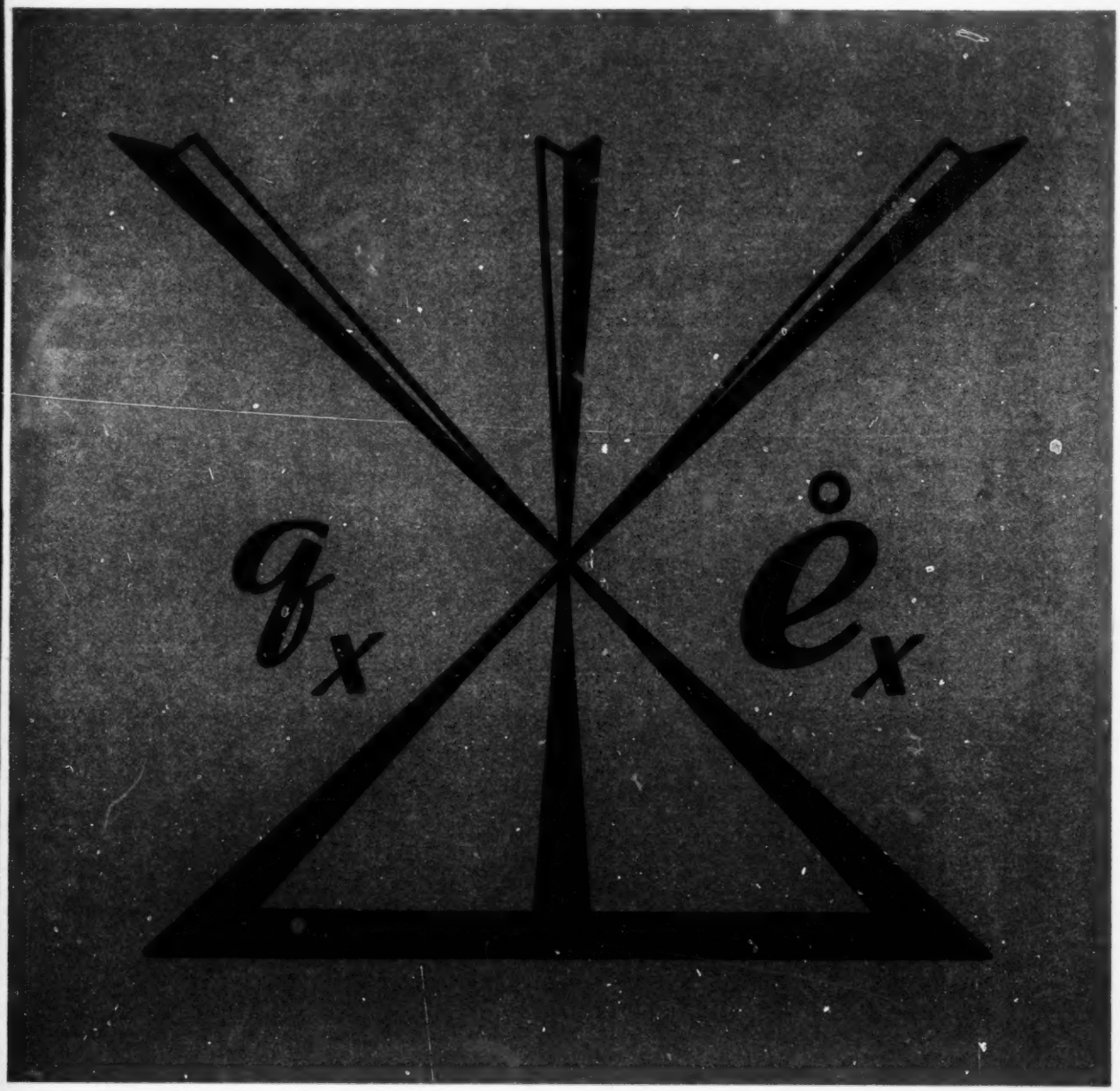

Mortality Differentials Favor Women
Accidental Poisoning
Population Growth in the United States and Canada
Current Mortality Report

TABLE 1—EXPECTATION OF LIFE

United States, 1900 to 1977

Period	Expectation of Life in Years								
	At Birth	Age 5	Age 15	Age 25	Age 35	Age 45	Age 55	Age 65	Age 75
Male									
1977*	69.3	65.6	55.9	46.8	37.6	28.7	20.6	13.9	8.7
1969-71*	67.0	63.8	54.1	45.1	36.0	27.2	19.4	13.0	8.1
1959-61*	66.8	64.1	54.4	45.2	35.9	27.1	19.3	13.0	8.0
1949-51	65.5	63.1	53.6	44.4	35.2	26.6	19.0	12.7	7.8
1939-41	61.6	60.8	51.4	42.5	33.8	25.5	18.2	12.1	7.2
1929-31†	57.8	58.2	49.2	40.8	32.7	24.8	17.8	11.7	7.0
1919-21†	55.4	57.4	48.8	41.0	33.3	25.7	18.5	12.2	7.3
1909-11‡	49.9	55.1	46.7	38.6	30.9	23.8	17.0	11.2	6.8
1900-02‡	47.9	54.2	46.1	38.4	31.2	24.1	17.4	11.5	6.8
Female									
1977*	77.1	73.2	63.4	53.8	44.2	34.9	26.2	18.3	11.6
1969-71*	74.6	71.2	61.4	51.8	42.3	33.1	24.6	16.8	10.3
1959-61*	73.2	70.2	60.5	50.8	41.3	32.1	23.5	15.8	9.3
1949-51	71.0	68.2	58.5	49.0	39.6	30.6	22.3	15.0	8.9
1939-41	65.9	64.4	55.0	45.9	37.0	28.5	20.5	13.6	8.0
1929-31†	61.2	60.7	51.6	43.0	34.9	26.8	19.4	12.8	7.6
1919-21†	57.3	58.2	49.4	41.6	34.2	26.6	19.3	12.7	7.7
1909-11‡	53.2	57.4	48.9	40.7	33.0	25.4	18.1	12.0	7.2
1900-02‡	50.7	55.8	47.6	39.9	32.7	25.4	18.4	12.2	7.3
Difference Female-Male									
1977	7.8	7.6	7.5	7.0	6.6	6.2	5.6	4.4	2.9
1969-71	7.6	7.4	7.3	6.7	6.3	5.9	5.2	3.8	2.2
1959-61	6.4	6.1	6.1	5.6	5.4	5.0	4.2	2.8	1.3
1949-51	5.5	5.1	4.9	4.6	4.4	4.0	3.3	2.3	1.1
1939-41	4.3	3.6	3.6	3.4	3.2	3.0	2.3	1.5	.8
1929-31	3.4	2.5	2.4	2.2	2.2	2.0	1.6	1.1	.6
1919-21	1.9	.8	.6	.6	.9	.9	.8	.5	.4
1909-11	3.3	2.3	2.2	2.1	2.1	1.6	1.1	.8	.4
1900-02	2.8	1.6	1.5	1.5	1.5	1.3	1.0	.7	.5

*Includes Alaska and Hawaii.
†Weighted average of white and nonwhite life expectancy.
‡Original Death Registration States.
Source of basic data: Bureau of the Census and the National Center for Health Statistics.

Mortality Differentials Favor Women

Women in the United States continue to enjoy greater longevity than men throughout the life cycle. They have a greater life expectancy and lower mortality at every age. This advantage generally holds for the leading causes of death across the age spectrum, for both whites and nonwhites, and for the insured population as well as the general population.*

Table 1 on the opposite page shows the life expectancy at selected ages from birth to 75 years of age for males and females in the general population of the United States from 1900-02 to 1977. The expectation of life at birth was 1.9 years greater among women than among men in 1919-21; by 1969-71 the differential in favor of women had grown to 7.6 years and reached 7.8 years in 1977. This female longevity advantage decreases with age, falling from 7.8 years at birth in 1977 to 2.9 years at age 75. However, the differential in favor of females increased at each age from 1969-71 to 1977, as had been the case in each decennial period since 1919-21.

When examined on a percentage basis (female/male ratio), the life expectancy advantage of women increased steadily during this 50-year period. Between 1969-71 and 1977, however, the ratio increased only at ages 65 and 75, and remained unchanged for the other ages shown in the table. Life expectancy at birth had been 3 percent greater for women than for men in 1919-21; by 1969-71 the differential had grown to 11 percent and remained at that level in 1977.

In the United States, males have in nearly all cases been subject to greater mortality than females since the beginning of the century, as indicated by the sex ratios of mortality shown in Table 2. For all ages combined on an age-adjusted basis, the extra mortality among males has continued to rise—from a 7-percent excess in 1920 to 80 percent in 1977. However, the average annual percent increase slowed somewhat between 1970 and 1977, and in some age groups (under 1 and 55-64) the male mortality disadvantage actually diminished. In general, the differential remains high, ranging from 26 percent higher mortality among males at ages 1-4 to 185 percent at ages 15-24. Recent mortality changes have been small at ages under 15 and there has been no change at ages 45-54. The sex differential has continued to widen, however, at ages 15-44 and 65 and over.

An examination of the sex differentials in mortality from the leading causes of death for the total United States population (shown in Table 3) indicates that in 1977 mortality among males was considerably higher than that among females for nearly all causes. Death rates among males fell below the rates for females, and then generally by only a small margin, only in the case of malignant neoplasms at ages 25-44, cerebrovascular diseases at ages under 1 and 85 and over, influenza and pneumonia at ages 5-14, and diabetes mellitus at ages 75 and over. The greatest extra mortality among males was caused by the chronic respiratory diseases at ages under 1, accidents at ages 1-14 and 25-34, suicide at ages 15-24 and 65 and over, and homicide at ages 35-64.

*See also December 1971 and August 1974 issues of the *Statistical Bulletin*.

TABLE 2—SEX RATIO OF MORTALITY, BY AGE

United States, 1900 to 1977

Ratio of Male to Female Mortality (%)

Year	All Ages*	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and Over
1977	180	127	126	162	285	242	184	185	197	197	161	128
1970	175	129	124	159	277	212	174	185	208	189	150	115
1960	161	132	121	149	248	176	163	188	193	171	133	111
1950	145	131	120	145	188	152	148	166	171	148	124	113
1940	129	130	117	132	126	123	130	145	145	129	117	108
1930†	119	127	115	124	109	110	121	128	125	119	112	107
1920†	107	128	109	113	96	90	103	108	110	108	105	103
1910†	116	124	109	106	114	113	126	126	121	112	109	104
1900†	110	123	107	99	103	101	109	111	112	111	108	105

*Adjusted on basis of age distribution of the United States total population, 1940.
†Death registration states.
Source of basic data: Reports of Division of Vital Statistics, National Center for Health Statistics.

Death rates from the leading causes of death in 1977 and the sex differentials in mortality for both whites and nonwhites are presented in Table 4 on page 6. For all causes combined, boys at the preschool ages (1-4) in both races experienced a mortality rate about one fourth greater than girls. The greatest sex differential in mortality occurred at ages 15-24 for both races—with the death rate for males reaching 292 percent of that for females among whites and 256 percent among nonwhites. Although the differential decreases at the higher ages, the male/female mortality ratio never falls below 140 percent for all causes combined.

In each age group under 45 the highest mortality among males of both races arose from external causes of death—accidents, suicide, or homicide—rather than from disease. At ages 45-64, the greatest sex differential in mortality among whites was attributed to diseases of the heart, and at ages 65 and over to malignant neoplasms. Among nonwhites the sex ratio of mortality was greatest for accidents in both these age groups.

For both races there was substantial excess mortality among females only from malignant neoplasms at ages 25-44; this has been attributed to the high death rates from cancer of the breast and reproductive organs among women at these ages. Among nonwhite females there was some excess mortality from congenital anomalies and from influenza and pneumonia, but the death rates from these causes were relatively low.

The percent distribution of causes of death varies both by sex and race as well as by age. Among whites at ages 15-24, accidents caused about 60 percent of the male deaths and 50 percent of the female deaths, while homicide was responsible for about 7 percent of the deaths for both sexes. Among nonwhites, however, 37 percent of the male deaths and 26 percent of the female deaths were attributed to accidents, but more than 30 percent of the male deaths and 20 percent of the female deaths resulted from homicide.

Sex differentials in mortality among insured lives are shown in Table 5 on page 7. This in-

sured group is largely urban and middle class, and usually employed in nonhazardous occupations in the professions, business, and trade. The 1972-77 intercompany experience among persons insured under Standard Ordinary policies issued 6 to 15 years earlier to applicants who had been medically examined showed that men had higher mortality than women at all ages, with the male to female mortality ratio ranging from a low of 115 percent at ages 10-29 to a high of 385 percent at ages 1-9 for all causes of death combined. In general, men experienced higher mortality than women for each of the causes of death shown in the table except malignant neoplasms and cerebrovascular diseases.

Among those insured under Standard Ordinary policies issued without medical examination, mortality from malignant neoplasms and from pneumonia and influenza was higher for women than for men, while mortality from the cerebrovascular diseases was about the same for both sexes. However, mortality from accidents and homicides, suicide, and diseases of the heart and circulatory system was considerably higher for men. The mortality experiences under medical and nonmedical life insurance issues are not directly comparable because of the effects of insurance company selection practices which require a medical history or medical examination because of age or the amount of insurance applied for.

Higher mortality among men than women throughout the life cycle has been attributed to both genetic and environmental factors. Supporting the genetic theory are many studies of both animals and human beings that show nearly universal inferior male longevity.[1] With only a few exceptions among the developing countries, women in most parts of the world have more favorable life expectancy than men. Recent biological research indicates that genes associated with the X chromosomes have been linked with male immunological deficiencies. Females have two such chromosomes to one for males.

TABLE 3—SEX RATIO OF MORTALITY FROM LEADING CAUSES OF DEATH

United States, 1977

Ratio of Male to Female Mortality (%)

Cause of Death	All Ages*	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and Over
All Causes	180	127	126	162	285	242	184	185	197	197	161	128
Diseases of heart	206	136	105	113	163	237	333	351	284	216	153	121
Malignant neoplasms	150	138	131	144	165	98	84	107	141	184	193	184
Cerebrovascular diseases	121	98	100	†	109	110	104	115	136	140	116	99
Accidents	282	128	141	207	360	427	340	290	260	215	167	141
Influenza and pneumonia	187	129	126	90	150	156	167	197	223	231	193	155
Bronchitis, emphysema and asthma	322	175	†	†	†	†	117	174	245	394	516	415
Cirrhosis of liver	219	100	†	†	†	217	203	210	229	231	235	215
Suicide	290	†	†	†	411	296	230	203	278	401	629	1,090
Diabetes mellitus	102	†	†	†	†	131	127	124	102	100	90	96
Arteriosclerosis	129	†	†	†	†	†	†	267	189	160	128	102
Homicide	360	111	120	118	329	419	416	424	375	311	206	247

*Adjusted on basis of age distribution of the United States total population, 1940.

†Mortality rates less than 0.5 per 100,000 population; ratio not computed.

Source of basic data: Unpublished data from Division of Vital Statistics, National Center for Health Statistics.

TABLE 4—MORTALITY FROM LEADING CAUSES OF DEATH*

United States, 1977

Cause of Death	WHITE					NONWHITE				
	Death Rate per 100,000		Percent Male of Female Death Rate	Percent of All Causes		Death Rate per 100,000		Percent Male of Female Death Rate	Percent of All Causes	
	Male	Female		Male	Female	Male	Female		Male	Female
Ages 1-4										
All Causes	69.7	55.0	127	100.0	100.0	108.1	87.1	124	100.0	100.0
Accidents	29.4	20.8	141	42.2	37.8	42.9	30.7	140	39.7	35.2
Congenital anomalies	8.6	8.5	101	12.3	15.5	9.7	10.4	93	9.0	11.9
Malignant neoplasms	6.2	4.5	138	8.9	8.2	4.6	4.5	102	4.3	5.2
Influenza and pneumonia	2.9	2.3	126	4.2	4.2	6.0	4.8	125	5.6	5.5
Homicide	1.9	1.6	119	2.7	2.9	8.2	6.3	130	7.6	7.2
Ages 5-14										
All Causes	40.6	25.3	160	100.0	100.0	52.8	31.0	170	100.0	100.0
Accidents	21.7	10.9	199	53.4	43.1	30.8	12.4	248	58.3	40.0
Malignant neoplasms	5.8	3.9	149	14.3	15.4	4.8	3.7	130	9.1	11.9
Congenital anomalies	1.9	1.7	112	4.7	6.7	1.9	2.2	86	3.6	7.1
Homicide	.9	.9	100	2.2	3.6	2.9	2.4	121	5.5	7.7
Influenza and pneumonia	.9	.9	100	2.2	3.6	1.1	1.2	92	2.1	3.9
Ages 15-24										
All Causes	167.3	57.2	292	100.0	100.0	205.1	80.1	256	100.0	100.0
Accidents	101.1	28.3	357	60.4	49.5	76.6	20.6	372	37.3	25.7
Suicide	22.9	5.5	416	13.7	9.6	15.5	4.0	388	7.6	5.0
Homicide	11.5	3.9	295	6.9	6.8	65.5	16.9	388	31.9	21.1
Malignant neoplasms	8.4	4.8	175	5.0	8.4	6.4	5.8	110	3.1	7.2
Diseases of heart	2.6	1.5	173	1.6	2.6	6.5	4.1	159	3.2	5.1
Ages 25-44										
All Causes	211.6	104.0	203	100.0	100.0	508.9	221.5	230	100.0	100.0
Accidents	62.5	16.5	379	29.5	15.9	99.2	20.6	482	19.5	9.3
Diseases of heart	35.0	9.8	357	16.5	9.4	66.8	30.7	218	13.1	13.9
Malignant neoplasms	26.3	30.3	87	12.4	29.1	37.7	39.9	94	7.4	18.0
Homicide	14.2	3.9	364	6.7	3.8	109.1	19.7	554	21.4	8.9
Suicide	25.9	10.1	256	12.2	9.7	21.7	6.1	356	4.3	2.8
Ages 45-64										
All Causes	1,259.0	646.6	195	100.0	100.0	1,956.8	1,103.5	177	100.0	100.0
Diseases of heart	526.9	161.7	326	41.9	25.0	623.3	331.3	188	31.9	30.0
Malignant neoplasms	324.7	262.3	124	25.8	40.6	487.0	307.4	158	24.9	27.9
Accidents	60.2	22.9	263	4.8	3.5	110.8	32.7	339	5.7	3.0
Cerebrovascular diseases	50.5	39.1	129	4.0	6.0	134.8	103.8	130	6.9	9.4
Cirrhosis of liver	50.9	23.0	221	4.0	3.6	88.1	40.5	218	4.5	3.7
Ages 65 and Over										
All Causes	6,545.4	4,447.0	147	100.0	100.0	6,218.8	4,435.8	140	100.0	100.0
Diseases of heart	2,894.8	1,999.9	145	44.2	45.0	2,331.4	1,851.0	126	37.5	41.7
Malignant neoplasms	1,330.0	752.1	177	20.3	16.9	1,414.0	707.6	200	22.7	16.0
Cerebrovascular diseases	647.5	655.5	99	9.9	14.7	729.4	706.1	103	11.7	15.9
Influenza and pneumonia	214.3	142.3	151	3.3	3.2	211.3	108.2	195	3.4	2.4
Accidents	129.6	83.9	154	2.0	1.9	146.0	72.3	202	2.3	1.6

*Listed according to rank among all males in 1977.

Source of basic data: Prepublished data from the National Center for Health Statistics, and Bureau of Census, Current Population Reports.

TABLE 5—SEX RATIO OF MORTALITY FROM LEADING CAUSES OF DEATH

Intercompany Standard Ordinary Insured Lives, Policy Years 6-15, 1972-77

Ratio of Male to Female Mortality (%)

Age at Issue	All Causes Combined	Malignant Neoplasms	Diabetes Mellitus	Cerebro-vascular Diseases	Diseases of Heart and Circulatory System	Pneumonia and Influenza	Accidents and Homicide	Suicide
Medical Issues								
All Ages*	144	94	157	84	295	136	191	159
0	246	91	†	†	†	†	245	†
1-9	385	357	†	300	1,725	†	288	900
10-29	115	135	†	43	208	350	146	72
30-39	119	61	300	56	329	85	186	145
40-49	160	93	233	86	397	147	280	266
50 and over	166	140	98	122	231	166	149	390
Nonmedical Issues								
All Ages*	162	91	†	103	305	90	267	185
0	144	110	†	†	121	108	179	†
1-9	221	204	†	†	104	†	281	442
10-29	170	106	†	89	228	75	281	195
30-39	138	72	175	97	361	100	216	135
40-49	178	100	313	130	408	176	234	172
50 and over	204	52	†	†	457	†	†	†

*Female mortality rates adjusted on basis of age distribution of male intercompany Standard Ordinary insured lives.
†Mortality rates less than 0.5 per 100,000; ratio not computed.
Source of basic data: 1977 Reports of Mortality and Morbidity Experience, Transactions, Society of Actuaries.

Thus males are more susceptible to infection and have a poorer chance of survival. In addition to such biological differences, environmental factors complicate analysis of sex differentials in mortality. Deaths due to violence and accidents are much more frequent among men than women. More men than women engage in dangerous occupations and avocations and are more apt to smoke and drink alcoholic beverages.

In recent years lower occupational mortality has favored men more than women, narrowing the sex differential to some degree. The increase in smoking among women and the corresponding decline among men may also narrow the mortality gap in the future—with important implications for the future trends in mortality from cancer and heart disease. On the other hand, mortality attributed to the many new and popular high-risk avocations (such as hang gliding, sky diving, and scuba diving), in which more males than females participate, has had the reverse effect, tending to widen the mortality differential between the sexes. Decreasing fertility and lower maternal mortality have also contributed to improved mortality among women and a widening of the sex differential in recent years.

The sex differential has fluctuated within a very narrow range (between 7.6 and 7.8 years) during the past decade. Provisional data for 1979 indicate that the life expectancy at birth for women in the United States still exceeds that for men by 7.7 years.

[1]Retherford RD: The changing sex differential in mortality. Studies in Population and Urban Demography No. 1. Westport, Conn.: Greenwood Press, 1975.

Accidental Poisoning

Accidental poisoning by solid and liquid substances caused 3,374 deaths in the United States in 1977, the latest year for which official figures are available. It was the second leading cause of accidental death at ages 25-34, outranked only by motor vehicle accident fatalities. Although the death rate from poisoning rose steadily from 1.29 per 100,000 population in 1968 to 2.20 in 1975, there was a reversal of the trend in 1976, with a decrease in the death rate to 1.94 and a further decline to 1.56 in 1977. However, the death rate in 1977 was still a fifth higher than that in 1968.

The increase in mortality from poisoning since 1968 was due primarily to a rise of about 30 percent in the death rate at ages 25-44 (from 1.85 per 100,000 in 1968 to 2.39 in 1977), and an increase of 25 percent at ages 65 and over (from 1.34 to 1.67 per 100,000). Smaller increases were recorded in the 15-24 and 45-64 age groups. The fatality rate among school-aged children did not change appreciably, but the rate among children under 5 years of age dropped by about 60 percent.

Males were the victims in six out of every 10 deaths from poisoning in 1977. For all ages combined, the death rate among males was 1.92 per 100,000, compared with 1.22 among females. The sex differential in mortality was small at ages under 15, but the death rates among males at ages between 15 and 44 were more than twice those among females. At ages 45-64, however, the fatality rate for males was about a tenth *lower* than the rate among females.

During the 1968-77 period, there were sizable increases in mortality from accidental poisoning among women at all ages over 14. Mortality from this cause doubled at ages 15-24, rose by more than 20 percent at ages 25-64, and increased by 50 percent at ages 65 and over. A sizable increase (34 percent) in the mortality from poisoning among men was recorded at ages 25-44, bringing the fatality rate to 3.30 per 100,000 population. The highest mortality among women (1.90 per 100,000) occurred at ages 45-54.

In 1977 drugs and medicaments caused two thirds of all deaths from accidental poisoning by solid and liquid substances. However, the relative importance of the various drugs responsible for such fatalities has changed in recent years. (See Table 1.) The tranquilizers and other analgesics and sedatives (excluding aspirin and related salicylates) accounted for almost two fifths of all accidental deaths from drug poisoning in 1968; by 1977 this proportion had declined to one fifth. There were 263 deaths from such drugs among males, with the heaviest toll at ages 25-44. Of the 209 deaths among females, two thirds occurred at ages 25-64.

Barbiturates accounted for about a fifth of all deaths from drug poisoning in 1968, but were responsible for less than a tenth of the total in 1977. Fatalities from barbiturate poisoning remained slightly higher among women than among men. During the 10-year period there was a 50-percent drop in the number of deaths from poisoning by aspirin and related salicylates. Aspirin products were once considered the major poisoning problem among children under 5 years of age; between 1968 and 1977, however, fatalities from aspirin poisoning diminished by about four fifths.

Deaths from accidental ingestion of morphine, heroin, and other opiates increased from 229 in 1968 to a high of 854 in 1976. Although fatalities

TABLE 1—DEATHS FROM ACCIDENTAL POISONING BY SOLIDS AND LIQUIDS

United States, 1968 and 1977

Agency of Poisoning	1968	1977						
	All Ages	All Ages	Under 5	5-14	15-24	25-44	45-64	65 and Over
All Causes								
Male	1,616	2,024	47	24	505	916	355	176
Female	967	1,350	47	16	204	433	434	216
Total	2,583	3,374	94	40	709	1,349	789	392
Drugs and medicaments								
Male	1,063	1,258	26	13	369	588	143	119
Female	629	956	31	13	157	305	273	177
Total	1,692	2,214	57	26	526	893	416	296
Barbiturates								
Male	151	96	1	—	27	35	21	12
Female	170	112	2	—	23	38	28	21
Total	321	208	3	—	50	73	49	33
Aspirin and related salicylates								
Male	63	22	7	—	—	3	6	6
Female	57	36	4	—	3	5	12	12
Total	120	58	11	—	3	8	18	18
Opiates and related narcotics								
Male	198	271	1	—	92	161	14	3
Female	31	73	1	1	27	36	8	—
Total	229	344	2	1	119	197	22	3
Tranquilizers and other analgesics and sedatives								
Male	467	263	4	3	71	143	34	8
Female	179	209	9	4	34	75	67	20
Total	646	472	13	7	105	218	101	28
Other and unspecified								
Male	184	606	13	10	179	246	68	90
Female	192	526	15	8	70	151	158	124
Total	376	1,132	28	18	249	397	226	214
Other solid and liquid substances								
Male	553	766	21	11	136	328	212	57
Female	338	394	16	3	47	128	161	39
Total	891	1,160	37	14	183	456	373	96

Source of basic data: Reports of the Division of Vital Statistics, National Center for Health Statistics.

dropped to 344 in 1977, the death toll was still 50 percent higher than that recorded in 1968. More than 90 percent of such deaths occurred at ages 15-44, and almost 80 percent were among males.

The number of fatal poisonings attributed to "other and unspecified drugs" has shown a marked increase in recent years. Such drugs accounted for about a fifth of all drug fatalities in 1968, but were responsible for half of all drug deaths in 1977. This category, which includes antibiotics, hormones, systemic and hemotologic agents, central nervous system depressants and stimulants, and drugs used for cardiovascular and gastrointestinal disorders, expands each year with the introduction of new drugs for the management of a wide variety of medical conditions.

About a third of all deaths from accidental poisoning by solids and liquids were caused by non-drug substances such as alcohol, cleaning and polishing agents, petroleum products, paints

and varnish, arsenic and lead, corrosives and caustics, pesticides and fertilizers, and poisonous plants. The number of such poisoning fatalities increased from about 900 in 1968 to more than 1,500 in 1975, but declined to 1,160 in 1977. Among preschool children, such poisoning fatalities have dropped by almost 75 percent during the past 10 years.

The National Clearinghouse for Poison Control Centers reported 156,330 cases in which poisonous substances were ingested in 1977. Although these are by no means the total number of such cases—many go unreported because patients are advised or treated by private physicians or hospitals not associated with Poison Control Centers—they are nevertheless representative of the total poisoning cases throughout the United States. The following table gives the age distribution of the 1977 victims.

POISONING CASES REPORTED BY POISON CONTROL CENTERS

United States, 1977

Age	Number of Cases
Under 1	9,986
1	30,908
2	34,154
3	14,254
4	5,647
5-9	6,853
10-14	4,295
15-24	16,160
25-44	11,551
45-64	3,292
65 and over	1,165
Unknown	18,065
Total	156,330

Children under 5 years of age accounted for 94,949 (almost 70 percent) of the 138,265 cases where the age was known; the risk of swallowing poisonous substances was greatest among two-year-olds. The number of victims in the 15-24 year age group was also high.

The substances most frequently ingested by children under 5 years of age are listed in Table 2 for the years 1972 and 1977. (These figures are based on phone inquiries and treated cases reported by the Poison Control Centers.) In 1977, plants were the most frequently involved substance among children in this age group, accounting for about one out of every eight case reports. Soaps, detergents, and cleaners ranked second (with about 6 percent of the total). Perfume, cologne, and toilet water moved from eighth place in 1972 to third in 1977. Aspirin, which had been the most frequently ingested substance in 1972, continued its decline of recent years and dropped to sixth place in 1977.

The Poison Control Centers have made a significant contribution to the major reduction in childhood poisonings. These centers—most of which maintain a 24-hour telephone service—provide physicians and others at the scene of the emergency with information on the toxic ingredients of household products and antidotes for them, so that proper treatment can be administered as quickly as possible.

The adoption of the Poison Prevention Packaging Act on December 30, 1970, provided another measure of protection from harmful or toxic substances for very young children. Under this Act, manufacturers of drugs, turpentine, and other household substances are required to provide special packaging for their products so that they cannot be opened by most children under 5 years of age. The regulations on aspirin packaging went into effect in August 1972. Since then, aspirin poisoning fatalities among children at ages under 5 have dropped dramatically. Non-fatal cases of aspirin poisoning among preschoolers have also shown a marked decline; the National Clearinghouse for Poison Control Centers reports a decrease in such cases from 8,146 in 1972 to 4,837 in 1974 and to 3,264 in 1977. Fatal and non-fatal poisoning from other drugs and household products among very young children have also declined since packaging regulations were promulgated.

In an attempt to reduce the misuse of drugs among teenagers and adults in the United States, the Controlled Substance Act was introduced by the Drug Enforcement Administration in 1970. The Act set up five drug schedules that classified drugs according to abuse potential, and made provision for limiting the number of times a pre-

TABLE 2—SUBSTANCES MOST FREQUENTLY INGESTED BY CHILDREN UNDER 5 YEARS OF AGE

United States, 1972 and 1977

Type of Substance	1972 Number	1972 Percent	1977 Number	1977 Percent
1. Plants	4,759	4.5	11,819	12.4
2. Soaps, detergents, cleaners	5,940	5.7	5,674	6.0
3. Perfume, cologne, toilet water	3,108	3.0	3,681	3.9
4. Antihistamines, medications for colds	4,355	4.1	3,661	3.9
5. Vitamins, minerals	5,320	5.1	3,622	3.8
6. Aspirin	8,146	7.8	3,264	3.4
Baby	5,305	5.1	2,211	2.3
Adult	1,322	1.3	491	.5
Unspecified	1,519	1.4	562	.6
7. Household disinfectants, deodorizers	3,301	3.1	2,813	3.0
8. Insecticides (excluding mothballs)	2,306	2.2	2,723	2.9
9. Miscellaneous analgesics	2,220	2.1	2,699	2.8
10. Miscellaneous internal medicines	3,186	3.0	2,403	2.5

Source of basic data: Reports of the National Clearinghouse of Poison Control Centers, Public Health Service.

scription might be refilled. Thus, drugs in Schedule II (including narcotic drugs such as opium, codeine, morphine, meperidine, etc.) can be dispensed only upon receipt of a written prescription which cannot be refilled. Drug prescriptions under other schedules may be transmitted to the pharmacist by telephone but such prescriptions must be committed to writing within 72 hours; prescriptions are valid for only six months from the date of issue and cannot be refilled more than five times. Drug classification is flexible; a drug could be placed under control, upgraded, downgraded, or even removed from control, as new evidence of abuse potential is uncovered. In addition to the federally sponsored Controlled Substance Act, state and local laws regulating the dispensing of drugs and their use have been enacted. Such legislation has been an important factor in reducing serious injuries and fatalities from drug poisoning.

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TABLE 1—POPULATION OF THE UNITED STATES BY GEOGRAPHIC AREA, 1970 TO 1980

Area	Numbers in Thousands				Annual Percent Increase*	
	April 1 1970	January 1 1975	January 1 1979	January 1 1980	During 1979	1970 to 1980†
United States						
Including Armed Forces overseas	204,402	212,748	219,699	221,719	0.9	0.8
Excluding Armed Forces overseas	203,302	212,245	219,213	221,227	.9	.8
New England	11,847	12,144	12,282	12,309	.2	.4
Maine	994	1,053	1,095	1,100	.5	1.0
New Hampshire	738	810	878	897	2.2	2.0
Vermont	445	471	490	496	1.2	1.1
Massachusetts	5,689	5,784	5,771	5,771	—	.1
Rhode Island	950	935	931	928	— .3	— .2
Connecticut	3,032	3,091	3,116	3,117	—	.3
Middle Atlantic	37,213	37,194	36,776	36,635	— .4	— .2
New York	18,241	18,062	17,701	17,579	— .7	— .4
New Jersey	7,171	7,313	7,326	7,334	.1	.2
Pennsylvania	11,801	11,819	11,750	11,723	— .2	— .1
East North Central	40,263	40,897	41,263	41,373	.3	.3
Ohio	10,657	10,730	10,734	10,743	.1	.1
Indiana	5,195	5,316	5,395	5,422	.5	.4
Illinois	11,110	11,175	11,236	11,234	—	.1
Michigan	8,882	9,095	9,196	9,233	.4	.4
Wisconsin	4,418	4,583	4,703	4,741	.8	.7
West North Central	16,328	16,708	17,081	17,192	.6	.5
Minnesota	3,806	3,922	4,043	4,085	1.0	.7
Iowa	2,825	2,867	2,905	2,910	.2	.3
Missouri	4,678	4,776	4,858	4,891	.7	.4
North Dakota	618	638	655	658	.5	.6
South Dakota	666	681	690	689	— .1	.3
Nebraska	1,485	1,544	1,572	1,578	.4	.6
Kansas	2,249	2,281	2,359	2,380	.9	.6
South Atlantic	30,679	33,426	34,820	35,176	1.0	1.4
Delaware	548	578	583	582	— .2	.6
Maryland	3,924	4,107	4,149	4,153	.1	.6
District of Columbia	757	716	664	646	— 2.7	— 1.6
Virginia	4,651	4,957	5,188	5,213	.5	1.1
West Virginia	1,744	1,794	1,870	1,883	.7	.8
North Carolina	5,084	5,403	5,590	5,628	.7	1.0
South Carolina	2,591	2,794	2,916	2,948	1.0	1.3
Georgia	4,588	4,908	5,097	5,140	.8	1.1
Florida	6,791	8,171	8,762	8,981	2.5	2.8
East South Central	12,808	13,472	14,036	14,161	.9	1.0
Kentucky	3,221	3,374	3,509	3,547	1.1	1.0
Tennessee	3,926	4,159	4,357	4,405	1.1	1.2
Alabama	3,444	3,594	3,749	3,791	1.1	1.0
Mississippi	2,217	2,344	2,420	2,418	— .1	.9
West South Central	19,326	20,775	22,257	22,710	2.0	1.6
Arkansas	1,923	2,088	2,174	2,190	.7	1.3
Louisiana	3,645	3,802	3,999	4,055	1.4	1.1
Oklahoma	2,559	2,713	2,868	2,914	1.6	1.3
Texas	11,199	12,172	13,216	13,552	2.5	1.9
Mountain	8,290	9,531	10,521	10,853	3.2	2.7
Montana	694	741	783	793	1.3	1.3
Idaho	713	805	894	917	2.6	2.5
Wyoming	332	370	438	462	5.5	3.3
Colorado	2,210	2,531	2,740	2,816	2.8	2.4
New Mexico	1,017	1,133	1,228	1,255	2.2	2.1
Arizona	1,775	2,178	2,412	2,495	3.4	3.4
Utah	1,059	1,192	1,342	1,394	3.9	2.7
Nevada	489	582	684	722	5.6	3.9
Pacific	26,548	28,095	30,177	30,817	2.1	1.5
Washington	3,413	3,533	3,860	3,997	3.5	1.6
Oregon	2,092	2,272	2,490	2,570	3.2	2.1
California	19,971	21,068	22,509	22,925	1.8	1.4
Alaska	303	361	409	405	— 1.0	2.9
Hawaii	770	861	909	920	1.2	1.8

*Based on rounded estimates. Minus sign (—) denotes decrease.

†Geometric average annual rate.

Note: Figures for divisions and states exclude population of the Armed Forces overseas. Figures have been independently rounded; hence, totals may not equal the sum of the parts.

Source: 1970 resident data from the Decennial Census with reported corrections through October 1979; all other figures compiled by the Statistical Bureau of the Metropolitan Life Insurance Company from data of the Bureau of the Census and the National Center for Health Statistics.

Population Growth in the United States and Canada

Both the United States and Canada continued to gain population during 1979, and at much the same rate of growth. During the year the United States population (including the Armed Forces overseas) increased by 2,020,000, or by 0.92 percent, to reach a total of 221,719,000 on January 1, 1980. This increment was somewhat higher than the 0.84 percent recorded in 1978. In Canada, a population gain of 221,000 in 1979 brought the total population to 23,810,000 by the end of the year. The growth rate of 0.94 percent in Canada was slightly higher than the rate of 0.85 percent registered in 1978.

The increased rate of population growth in the United States during 1979 was due largely to a higher level of natural increase—the excess of births over deaths—which amounted to 1,567,000 in 1979. The rate of natural increase in 1979 was 7.1 persons per 1,000 population—the net result of a rise in the birth rate and a decrease in the death rate—compared with 6.5 per 1,000 in 1978. The United States also gained about 462,000 persons through migration during 1979, compared with 343,000 during 1978.

There were an estimated 3,473,000 live births in 1979, compared with 3,333,279 in the previous year, and 3,326,632 in 1977. The birth rate increased from 15.3 per 1,000 population in 1978 to 15.8 per 1,000 in 1979. The increase in births was attributed to a rise in fertility level, as well as an increase in the number of women of childbearing age.

There were about 1,906,000 deaths in the United States in 1979, a slight decrease from the 1,924,000 deaths the year before. The crude death rate declined from 8.8 per 1,000 population in 1978 to an all-time low of 8.7 per 1,000 in 1979, despite the continued aging of the population. Significant progress has been made recently in reducing mortality in the first year of life. The infant mortality rate continued its downward trend, dropping to 13.0 deaths per 1,000 live births in 1979. Life expectancy at birth increased by 0.5 years and reached a new high of 73.8 years in 1979 (according to a provisional life table prepared by the Statistical Bureau of Metropolitan Life). The decline in mortality from the major cardiovascular diseases (about 3 percent) in 1979 contributed to the improvement in life expectancy.

Population growth during 1979 was most rapid in the South and the West and below the national average in the Northeast and North Central regions. As shown in Table 1, the Mountain States had the highest rate of growth in the country (3.2 percent), while the South Atlantic and East South Central geographic divisions grew at about the same pace as the nation as a whole. The population growth rate was below the national average in the New England, East North Central, and West North Central States, but only the Middle Atlantic States registered a decline in population.

When compared with the average growth rates for the 1970-80 period, population growth rates during 1979 were higher in the West South Central, Mountain, and Pacific divisions. The growth rate in 1979 was lower than the 10-year average in the South Atlantic States and in some of the New England States. There was little difference

TABLE 2—POPULATION OF CANADA BY PROVINCE, 1970 TO 1980

Province	Numbers in Thousands				Annual Percent Increase*	
	January 1 1970	June 1 1976	January 1 1979	January 1 1980	During 1979	1970 to 1980†
Canada	21,182	22,993	23,589	23,810	0.9	1.2
Newfoundland	516	558	573	577	.7	1.1
Prince Edward Island	110	118	123	124	.8	1.2
Nova Scotia	779	829	846	851	.6	.9
New Brunswick	625	677	699	705	.9	1.2
Quebec	6,002	6,234	6,273	6,288	.2	.5
Ontario	7,488	8,264	8,480	8,543	.7	1.3
Manitoba	979	1,022	1,031	1,026	— .5	.5
Saskatchewan	948	921	954	965	1.2	.2
Alberta	1,579	1,838	1,990	2,053	3.2	2.6
British Columbia	2,107	2,467	2,557	2,612	2.2	2.1
Yukon and Northwest Territories	49	64	65	65	—	2.8

*Based on rounded estimates. Minus sign (—) denotes decrease.
†Geometric average annual rate.
Note: Figures have been independently rounded; hence, totals may not equal the sum of the parts.
Source of basic data: Reports of Statistics Canada.

in rates in the East North Central and West North Central divisions. In the Middle Atlantic States, the rate of population decline in 1979 was more pronounced than the 10-year average, due largely to the continued population loss in New York State.

California, the most populous state in the nation, recorded the largest numerical growth (416,000) in 1979, raising its resident population to more than 22,900,000. Significant population increases also occurred in Texas (336,000) and Florida (219,000). New York, the second most heavily populated state, lost 122,000 residents in 1979; there were 17,579,000 New Yorkers by year end.

Nevada had the highest population growth rate, 5.6 percent, followed closely by Wyoming with a 5.5-percent increase. The District of Columbia had the greatest decline, 2.7 percent, in 1979. Although several states experienced some decrease in population, only Alaska had an appreciable rate of decline—1.0 percent. The growth rates in New Hampshire, Vermont, Texas and Florida were relatively high in comparison with those of other states in the same division, while population decreases in Rhode Island, South Dakota, Mississippi, and Alaska were atypical for their respective areas.

There was only a slight increase in the population of Canada in 1979, continuing the trend of lessened population growth in Canada in recent years. A lower rate of net immigration prevailed in 1979 than in some earlier years. In addition, the number of births declined from 358,852 in 1978 to an estimated 357,590 in 1979, while the birth rate fell from 15.3 to 15.1 per 1,000 live births. With about 170,580 deaths last year, the death rate remained unchanged at 7.2 per 1,000 population for the third year in succession.

Alberta and British Columbia continued to lead in population growth in 1979, accounting for more than 50 percent of the total population increase in Canada. The unusually high rate of natural increase in Alberta continued to contribute substantially to the population growth rate in that province. All other provinces had moderate population growth, with the exception of Manitoba and the Yukon and Northwest Territories.

Ontario—the most heavily populated province—gained about 63,000 residents in 1979, bringing its total population to 8,543,000. Quebec, the second most populous province, added just about 15,000 inhabitants, reaching a residential population of 6,288,000 by the end of the year.

CURRENT MORTALITY REPORT

Standard Ordinary Policyholders, Metropolitan Life Insurance Company and United States Population

1979 Compared with 1978 and 1974-78

Cause of Death (8th Revision)	Death Rate per 100,000 in 1979	1979 Death Rate as Percent of that in 1978	1974-78
METROPOLITAN LIFE INSURANCE COMPANY STANDARD ORDINARY POLICYHOLDERS*			
All Causes	687.9	94%	92%
Major cardiovascular diseases	335.6	93	89
Diseases of heart	271.1	93	89
Ischemic and related heart disease	237.1	92	87
Cerebrovascular diseases	46.0	95	83
Cancer, all forms	184.6	97	98
Respiratory	51.3	100	104
Digestive	46.7	96	95
Accidents, all forms	31.2	97	97
Motor vehicle	16.1	101	106
Influenza and pneumonia	12.8	80	88
Cirrhosis of liver	9.9	87	78
Diabetes mellitus	9.4	83	77
Suicide	9.4	96	95
Bronchitis, emphysema and asthma†	7.6	81	68
Homicide	4.2	116	99
Cause of Death (9th Revision)			
UNITED STATES GENERAL POPULATION			
All Causes	866.2	98%	97%
Major cardiovascular diseases	431.6	98	95
Diseases of heart	330.4	99	98
Ischemic and related heart disease	251.9	‡	‡
Cerebrovascular diseases	76.5	97	87
Malignant neoplasms	183.5	101	104
Accidents and adverse effects	47.0	95	97
Motor vehicle accidents	23.6	96	104
Chronic obstructive pulmonary diseases and allied conditions	22.7	‡	‡
Pneumonia and influenza	20.0	75	76
Diabetes mellitus	15.0	100	93
Chronic liver disease and cirrhosis	13.5	99	92
Suicide	11.7	93	93
Homicide and legal intervention	10.0	103	104

*Death rates for 1978 and 1974-78 are adjusted to correspond to the age and sex distribution of the Standard Ordinary policyholders in 1979.

†Decrease is an artifact of medical certification rather than a real reduction in mortality.

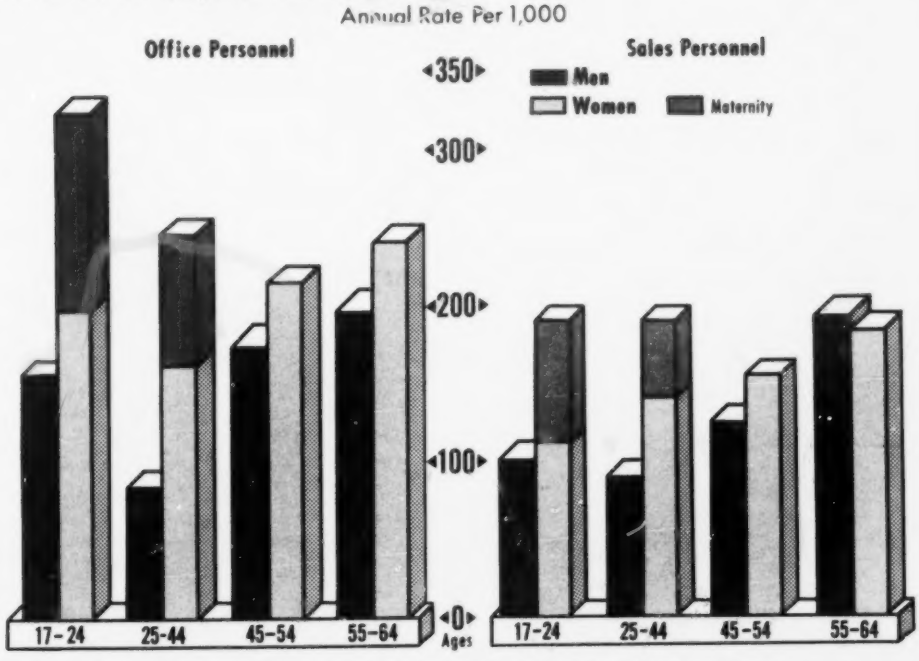
‡Not computed because changes due to the 9th Revision of cause of death coding procedures have significantly affected the comparability between death rates for these causes in 1979 and those for 1974 to 1978.

Note: The experience among policyholders is not strictly comparable with that in the general population because of (i) the effects of risk selection and (ii) differences in composition by age, sex, occupation, etc. In addition, in 1979, deaths in the general population were coded according to the 9th Revision of the International Classification of Diseases while deaths among policyholders were still coded according to the 8th Revision.

Source of basic data: Standard Ordinary policyholders—Claims paid in the period indicated. General population—Reports of the Division of Vital Statistics, National Center for Health Statistics. Death rates are provisional.

Incidence of Disability–1979

Personnel of the Metropolitan Life Insurance Company



Disability lasting longer than a week. Personnel in the Pacific Coast States and Canada are not included.

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